

In the claims:

Claims 1 to 25 (canceled)

26. (currently amended) A method for fabricating a semiconductor device having a semiconductor chip including a planar active surface and a metallization pattern including a plurality of contact pads, comprising the steps of:

depositing at least one added conductive layer on said metallization pattern of said contact pads,

said added conductive layer having a conformal surface adjacent said chip and fabricating a planar outer surface on said added conductive layer,

said planar outer surface suitable to form metallurgical bonds without melting.

27. (previously presented) The method according to Claim 26 wherein said step of depositing is selected from a group consisting of sputtering, evaporating, and plating.

28. (currently amended) The method according to Claim 26 wherein said step of fabricating a planar outer surface of said added conductive layer comprises the step of depositing said at least one added conductive layer by electroless plating.

29. (currently amended) The method according to Claim 26 wherein said step of fabricating a planar outer surface of said added conductive layer comprises the step of depositing said at least one added conductive layer by screen printing.

30. (currently amended) The method according to Claim 26 wherein said step of fabricating a planar outer surface of said added conductive layer comprises the step of depositing said at least one added conductive layer by using the method of support by islands of protective overcoat.

31. (currently amended) A method for fabricating a semiconductor assembly comprising the steps of:

providing a semiconductor chip having a planar active surface including an integrated circuit, said integrated circuit having metallization patterns including a plurality of contact pads at said planar active surface,

providing a protective overcoat over said planar active surface, said protective overcoat including windows exposing said plurality of contact pads, said windows having sidewalls;

~~each of said contact pads having~~ providing an added conductive layer on said metallization pattern covering and conformal to each of said contact pads, said window sidewalls, and a portion of said protective overcoat surrounding said windows and having a planar outer surface, said added layer having a conformal surface adjacent said chip and a planar outer surface;

said outer surface suitable to form metallurgical bonds without melting;

providing an assembly board having a plurality of planar, metallurgically bondable terminal pads in a distribution aligned with the distribution of said ~~chip~~ contact pads;

aligning said added chip metallization and said board pads so that each of said ~~chip~~ contact pads is connected to a corresponding board terminal pad; and

metallurgically bonding said chip metallization and said board pads without melting said outer surface.

32. (previously presented) The method according to Claim 31 wherein said bonding comprises one of the following assembly techniques:

direct welding by metallic interdiffusion;

attaching including solder paste;

attaching including a conductive adhesive.